

WHAT IS CLAIMED IS:

1. A printing plate removing/supplying device comprising:

an accommodating portion at whose top end an opening is formed, and which accommodates, stacked in plural levels in a state of being provided at predetermined intervals, cassettes in which plural printing plates are loaded in from an upper side and stacked, the accommodating portion having a loading space which is directly beneath the opening and at which one of the cassettes can be accommodated, and the printing plates can be loaded from the opening into the cassette which is positioned at the loading space;

a cover member provided at the opening of the accommodating portion and able to open and close the opening;

a removing portion provided adjacent to the accommodating portion, a printing plate removing position being set at the removing portion;

a cassette moving mechanism which is provided at the removing portion, and which, independently of other cassettes, pulls one cassette selected from among the plural cassettes out to the removing portion and moves the selected one cassette to the removing position, and which is able to move the selected one cassette to the loading space as well; and

a removing/conveying mechanism provided at the removing portion, and removing the printing plate from the cassette positioned at the removing position, and able to convey and supply the printing plate to a portion-to-be-supplied-to of a subsequent process.

2. The printing plate removing/supplying device of claim 1, wherein the cover member is movable so as to open and close the opening, within a range of an interior of the accommodating portion and an interior of the removing portion.

3. The printing plate removing/supplying device of claim 1, wherein the cassette moving mechanism comprises a raising/lowering stand, and feed screws supporting the raising/lowering stand and able to move the raising/lowering stand up and down.

4. The printing plate removing/supplying device of claim 1, wherein the removing position is a position in an up/down direction of the printing plates.

5. The printing plate removing/supplying device of claim 1, wherein the cover member is a sliding cover which is provided parallel to an upper edge of the accommodating

portion, and which can slide horizontally, and which is rectangular and flat-plate-shaped.

6. The printing plate removing/supplying device of claim 1, wherein convex and concave portions are formed at one edge of the cover member, and a spur gear, which is provided at an upper side of the one edge of the cover member and which can rotate relative to the removing portion, can engage with the convex and concave portions.

7. The printing plate removing/supplying device of claim 1, wherein the cover member is a flexible shutter.

8. The printing plate removing/supplying device of claim 1, wherein the cover member is a folding cover which can be folded over.

9. The printing plate removing/supplying device of claim 3, wherein the removing/conveying mechanism comprises a plurality of suction cups disposed along a transverse direction of the printing plates, and base points supporting the suction cups such that the suction cups are suspended downward, and the suction cups can move to the removing position as the base points move.

10. The printing plate removing/supplying device of claim 6, further comprising a drive source connected so as to be able to transfer power to a supporting shaft of the spur gear.

11. The printing plate removing/supplying device of claim 7, wherein at least two chains are provided at transverse direction end portions of the accommodating portion, and both transverse direction end portions of the shutter are fixed to the chains.

12. The printing plate removing/supplying device of claim 8, wherein the folding cover comprises a first plate member and a second plate member having same configurations and same dimensions, and the first and second plate members are both disposed in a state in which both transverse direction end portions thereof are supported at a step formed at the opening of the accommodating portion, and the opening can be closed by the first and second plate members, and end portions of the first and second plate members which end portions oppose one another are connected by a hinge, and the folding cover can be folded over via the hinge.

13. The printing plate removing/supplying device of claim 9, wherein the base points can move horizontally along the cassette which is on the raising/lowering stand and can

rotate, and after the suction cups have sucked the printing plate, the suction cups, together with the base points, can convey the printing plate while inverting the printing plate by rotating 180° while moving horizontally.

14. The printing plate removing/supplying device of claim 9, wherein the cover member is disposed at a position which is lower than the base points of the removing/conveying mechanism.

15. The printing plate removing/supplying device of claim 10, wherein, when the drive source is operated and the spur gear rotates, the cover member, which is engaged with the spur gear via the convex and concave portions, moves toward the removing portion, and is thereby able to open the opening of the accommodating portion.

16. The printing plate removing/supplying device of claim 10, further comprises sprockets which are connected together by a shaft and the drive source is provided beneath one of the sprockets.

17. The printing plate removing/supplying device of claim 11, wherein each of the chains is trained around four sprockets

which are rotatably supported at a transverse direction side inner wall of the accommodating portion.

18. The printing plate removing/supplying device of claim 12, wherein a shaft is fixed to one end portion of the first plate member, and due to the shaft being rotatably supported at the opening of the accommodating portion, the first plate member can rotate around the shaft with respect to the accommodating portion.

19. The printing plate removing/supplying device of claim 12, wherein one end portion of the second plate member is supported so as to be movable along the step formed at the opening.

20. The printing plate removing/supplying device of claim 14, wherein, when the cover member is moved toward the removing portion, the suction cups are rotated 180° from the removing position and disposed above the base points, and the cover member can be disposed between the removing/conveying mechanism and the cassette moving mechanism.